

Degree programme	Type	Course
Chemical Engineering	FB	1

Contact lecturer

Name : Manuel Angel Gil Escuin

Email : manuelangel.gil@uab.cat

Prerequisites

There are no official requirements for this course but basic knowledge of technical drawing.

Group languages

You can consult this information at the [end](#) of the document.

Objectives

The objective of the Graphic Expression subject is to prepare students so they can compose and interpret the necessary graphic documents to carry out their professional activity.

The description of mechanical parts, laboratory facilities schemes and industrial plants, etc.

For this purpose, the intention is to give you the knowledge about the systems and techniques of representation most appropriate to each case. The basic concepts of drawing, normalization and presentation will be introduced.

Special attention will be given to the application of computer-assisted representation techniques, with a parallel development of spatial interpretation capabilities.

Students will be introduced to work in two dimensions with the specific software selected (autocad) and will be provided with tools and functions to advance their knowledge of the specified software.

Learning outcomes

1. Identify the different expression techniques and representation systems.
2. Define the basic concepts of standardisation and presentation methods.
3. Select the suitable graphic expression techniques and systems for each particular case in the practical preparation of a project.
4. Apply basic IT resources to computer assisted design.
5. Develop scientific thinking.
6. Work autonomously.
7. Efficiently use ICT for the communication and transmission of ideas and results.
8. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.

Contents

Initiation to work in Autocad 2D.

Autocad 2D basics.

General concepts. Menus. Commands. Entities. Screen display commands. Program help. Exchange of files.

Drawing and construction orders.

Drawing orders and construction orders of entities. Preparation of drawing. Work with layers. Reference to entities. Work with absolute and relative magnitudes.

Edition orders of entities.

Editing entities. Utilities and additional orders.

Tools and functions to advance in the knowledge of Autocad 2D.

Texts, hatch patterns, dimension and blocks.

Definition of text style and text creation. Hatch patterns. Definition of the dimension style. Drawings dimensioning. Creation and management of blocks.

Presentation of drawings. Paper space.

Creation of presentations. Paper space - model space. Paper output

Basic Concepts of Drawing and Descriptive Geometry.

Basic Geometry concepts

Structure of space basics, tangencies. Standardization and presentation criteria.

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Resolution of practices	20	0.8	1, 2, 3, 4, 5, 6, 7, 8
Study, Documentation research and Resolution of practices	38	1.52	1, 2, 3, 4, 5, 6, 7
Tutorial class and Virtual Campus	3.5	0.14	1, 2, 3, 4
Master Classes	12	0.48	1, 2, 3

Students are trained through mostly practical exercises to be able to find the solution to specific problems that the comprehension and the representation of graphic elements may present.

The training is reinforced with master classes to guide and keep the students on the right path with continuous monitoring carried out by the teachers in both their workshop and their autonomous work.

Outside the academic hours, the communication between the students and the teaching staff will be through the UAB Virtual Campus.

All communications from the teaching body to a student or group of students, whether they are of general interest to all students or a single one, will be made through the virtual Campus or the corporate email of the UAB.

The use of a personal laptop is permitted for both classroom practice and the qualifying test.

Annotation: within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Partial tests consisting of the resolution of individual practices carried out throughout the course. Global value of 50%	50%	1.5	0.06	1, 2, 3, 4, 5, 6, 7, 8
Delivery of practices performed and proposed at the workshop throughout the course. Global value of 50%	50%	0	0	1, 2, 3, 4, 5, 6, 7, 8

In order to pass the course, students must be able to demonstrate that they have acquired enough skills to efficiently use the computer program required (AutoCAD), as well as having acquired sufficient skills to interpret and perform basic plans and diagrams in two dimensions volumes and be able to make the

presentations in an appropriate way according to the required specifications,

The practices carried out in the workshop and those done by the students at home will be valued so that the continued work and the punctual follow-up of the classes, workshops and practices will be rewarded.

Programmed evaluation process and activities:

A single evaluation will be carried out.

The course consists of the evaluation activities:

Activity 1: Complete delivery of all mandatory practices. 50% on the final grade

Activity 2: Individual test of the complete temary. 50% on the final grade

All the students receiving a single evaluation will carry out the two activities (exam and delivery of practices) on the same day.

Students will pass the course obtaining a minimum grade of 5 out of 10 once the average of the course practices

The minimum grade for each of these activities must be 3.5 to be able to average the others.

A grade lower than 3.5 in one of the two activities of the course implies that it will not be able to do the average w

In order to pass the course in regular assessment, it will be necessary to obtain a minimum grade of 5 in the aver

Programming evaluation activities

The calendar of the evaluation activities will be given on the first day of the subject and will be made public through the Virtual Campus and in the exams section on the Engineering School website. Expected calendar:

Activity 1: Weeks 1 to 7 of the subject
with the final delivery in week 7.

Activity 2: Week 7 of the subject

Recovery process

The same recovery system will be applied as for continuous assessment.

If a student does not pass the subject with the first assessment by the described system above, he/she will have an option for a global recovery exam in which he/she will have to take a test on all topics of the course

In this case, obtaining a minimum grade of 5 out of 10 in the global recovery test, the student would pass.

The student can apply for the recovery test only if he/she accomplished a set of activities that represent at least two thirds of the total grade of the subject.

Review of qualifications Procedure

A place, date and time of revision will be set for each evaluation activity in which the students will be able to review the activity along with the teacher. In this context, claims may be made on the activity grade. Those claims will be evaluated by the teacher responsible for that subject. If the student does not show up for this revision, his/her activity will not be reviewed later.

Qualifications

With Honours: Granting an honours degree is the decision of the faculty responsible for the subject. The regulations of the UAB indicate that Hons can only be granted to students who have obtained a final grade equal to or greater than 9.00. The number of students granted "with honours" cannot exceed 5% of the total number of students enrolled.

The non-delivery of at least 90% of the practices will imply the qualification of \"Not evaluated\".

The non-attendance to any of the individual tests will imply the qualification of \"Not evaluated\".

The given grade to not delivered practices will be 0.

In this subject, the use of Artificial Intelligence (AI) technologies is not allowed in any of its phases. Any work that includes fragments generated with AI will be considered a lack of academic honesty and may lead to a partial or total penalty in the grade of the activity, or greater sanctions in serious cases.

Irregularities by the student, copy and plagiarism

Without prejudice to other disciplinary measures deemed appropriate and in accordance with the current academic regulations, any irregularities committed by the student that may lead to a variation of the rating of an evaluation act, copying or allowing to copy a practice or any other evaluation activity, will mean failing with a zero grade. In the event that this grade was necessary to pass, the whole subject will be failed. The evaluation activities qualified this way and by this procedure will not be recoverable and therefore the subject will be failed directly with no opportunity to recover it in the same academic year.

Evaluation of repeating students

The system of evaluation of the subject for students from the second enrollment will be the same as for the rest of the students, except they will be required to present a set of activities that represent a minimum of two thirds of the total grade of the student. subject to be able to access the recovery test.

Therefore, students from the second registration can make the recovery test even if they have not done any of the activities provided in the regular evaluation.

Bibliography

MONTAÑO DE LA CRUZ, Fernando. Autocad 2022. Manual imprescindible. Anaya Multimedia.

Any other manuals and guides existing on the market published about the latest version of the program, comprising 2D and 3D teaching, can be good as a help to the student to support the explanations given in class.

https://bibcercador.uab.cat/discovery/fulldisplay?docid=alma991010692335906709&context=L&vid=34CSUC_UA

Software

Autocad 2018 or any of the later versions.

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through

this [link](#). To access the information, you will need to enter the course CODE

Type of teaching	Group	Language	Semester	Shift
(TE) Theory	1	Catalan/Spanish	first semester	morning-mixed
(PLAB) Practical laboratories	1	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	2	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	3	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	4	Catalan	first semester	morning-mixed